A Revision of the Genus *Stenolechia* MEYRICK from Japan (Lepidoptera, Gelechiidae)*

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Synopsis Six Japanese species of the genus *Stenolechia* excluding *issikiella* are treated. Three new species, *S. robusta*, *squamifera* and *rectivalva* are described and figured. The male genitalia of *S. notomochla* are described for the first time. Keys to the species are provided.

Introduction

The genus *Stenolechia* MEYRICK, 1894 contains small-sized gelechiid moths having the white to whitish ochreous forewings marked with scattered dark spots, and two dark rings encircling the terminal segments of labial palpi. The generic name *Stenolechia* was proposed by MEYRICK as an objective replacement name for *Poecilia* HEINEMANN, 1870, which is a junior homonym of *Poecilia* SCHNEIDER, 1801 (Pisces). He also designated *Recurvaria nivea* HAWORTH, 1828 (an unjustified emendation of *Alucita nivella* FABRICIUS, 1794) as the type-species of the genus. As *R. nivea*, however, is not an originally included species of *Poecilia* HEINEMANN, it is not eligible as the type-species of either *Poecilia* or its objective replacement name, *Stenolechia* (SATTLER, 1973). Subsequently MEYRICK (1925) cited as the type-species of the genus *Phalaena* (*Tinea*) *gemmella* LINNAEUS, 1758, which is currently considered as a senior synonym of *nivella*.

MEYRICK (1925) assigned this genus to the third group (*Gelechia* type) of his nine divisions of the family Gelechiidae STAINTON, 1854. Although the taxonomic position of this genus has not been discussed since then, it may belong to the subfamily Gelechiinae, which is equivalent to the MEYRICK's third group. The subfamily Gelechiinae is currently subdivided into three tribes, namely, Gelechiini, Gnorimoschemini and Teleiodini according to PISKUNOV (1973) and SATTLER (1976, 1979), but they did not treat *Stenolechia* in their systems. The genus resembles the genera *Teleiodes*, *Xenolechia*, *Pseudotelphusa* and *Teleiopsis* of the tribe Teleiodini in the following respects: Forewing with groups of raised scales on upperside; 2nd segment of labial palpus covered with appressed scales above, hardly rough ones beneath; 3rd segment of labial palpus shorter than the 2nd segment. But the presence of distinct saccus in the male genitalia and the absence of veins M_3 and Culb in the forewing clearly distinguish this genus from any genera of Teleiodini. Moreover, all the Japanese species

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of *Stenolechia* including *issikiella* have a peculiar specialization that the anterior end of saccus of the male genitalia is fused with the base of subzonal sheath of aedeagus in varied degrees. This condition seems to be very rare in Lepidoptera, and it is thought to be a synapomorphy of these species. SATTLER (1960) mentioned that the aedeagus was tightly fused with vinculum in Teleiodini, but the condition found in the Japanese *Stenolechia* seems to be fundamentally different from that in Teleiodini judging from the illustrations given by SATTLER (1960) and PISKUNOV (1973).

Up to the present this genus is known to include 14 species from the Palaearctic and Oriental regions, of which four species are recorded from Europe and Asia Minor, six from India and Ceylon, and four from Japan. The Japanese *Stenolechia* was first studied by MEYRICK (1935), who described two new species, *bathrodyas* and *notomochla*, on the basis of the materials collected by Prof. ISSIKI. The former species was described from only one male type and the latter from three females. ISSIKI (1957) illustrated *bathrodyas* and commented on the generic characters and numbers of species of *Stenolechia* occurring in Japan and Europe. Later OKADA (1961) described *issikiella* based on male specimens, and redescribed the female of *notomochla*. Furthermore OKADA (1962) described a new species, *kodamai*, gave detailed descriptions of both sexes of *bathrodyas* and the larvae of both species, and commented on their bionomics. He also suggested the presence of another species (Japanese name: Kometsuga-chibi-kibaga) of this genus which infested on the conifers, but I failed to decide which the new species treated in this paper corresponds to. Thus the Japanese *Stenolechia* is represented by four named and one unidentified species.

As a result of a survey of all the known Japanese species hitherto assigned to the genus *Stenolechia*, I noticed the uniqueness of *issikiella* in comparison with all other species, which was mainly found in the following characters. In the forewing the vein M_1 is not stalked with the vein R_5, but arises at the anterodistal portion of discoidal cell independently of the common stem of veins R_4 and R_5. In the hindwing the short section of the vein R_1 which connects the vein Rs with the vein Sc is distinctly retained. In the male genitalia the base of costal arm of valva is greatly enlarged and recurved. Because of these characters it is unnatural to assign *issikiella* to *Stenolechia* in the present system of gelechiid classification. Therefore I exclude this species from the scope of the present study.

In the course of the revised study on the Japanese Gelechiidae I found three undescribed species apparently belonging to this genus in addition to the hitherto unknown male of *notomochla*. In this paper I describe these new species and give descriptions and illustrations of the male and female genitalia of all the known species and keys to the Japanese species based on these organs and on external characters.

Concerning the life histories of the species occurring in Japan, it has been recorded that the larvae of *bathrodyas* and *kodamai* are leaf-miners of conifer trees, *Juniperus chinensis* LINNAEUS and *Pinus densiflora* SIEB. et ZUCC., respectively (OKADA, 1962). In addition, I obtained an information that the larvae of *notomochla* were shoot-borers of *Quercus dentata* THUNB. (Dr. F. KOMAI, personal communication).

All the holotypes of the new species described in this paper are deposited in the collection of Entomological Laboratory, Faculty of Agriculture, Kyushu University.

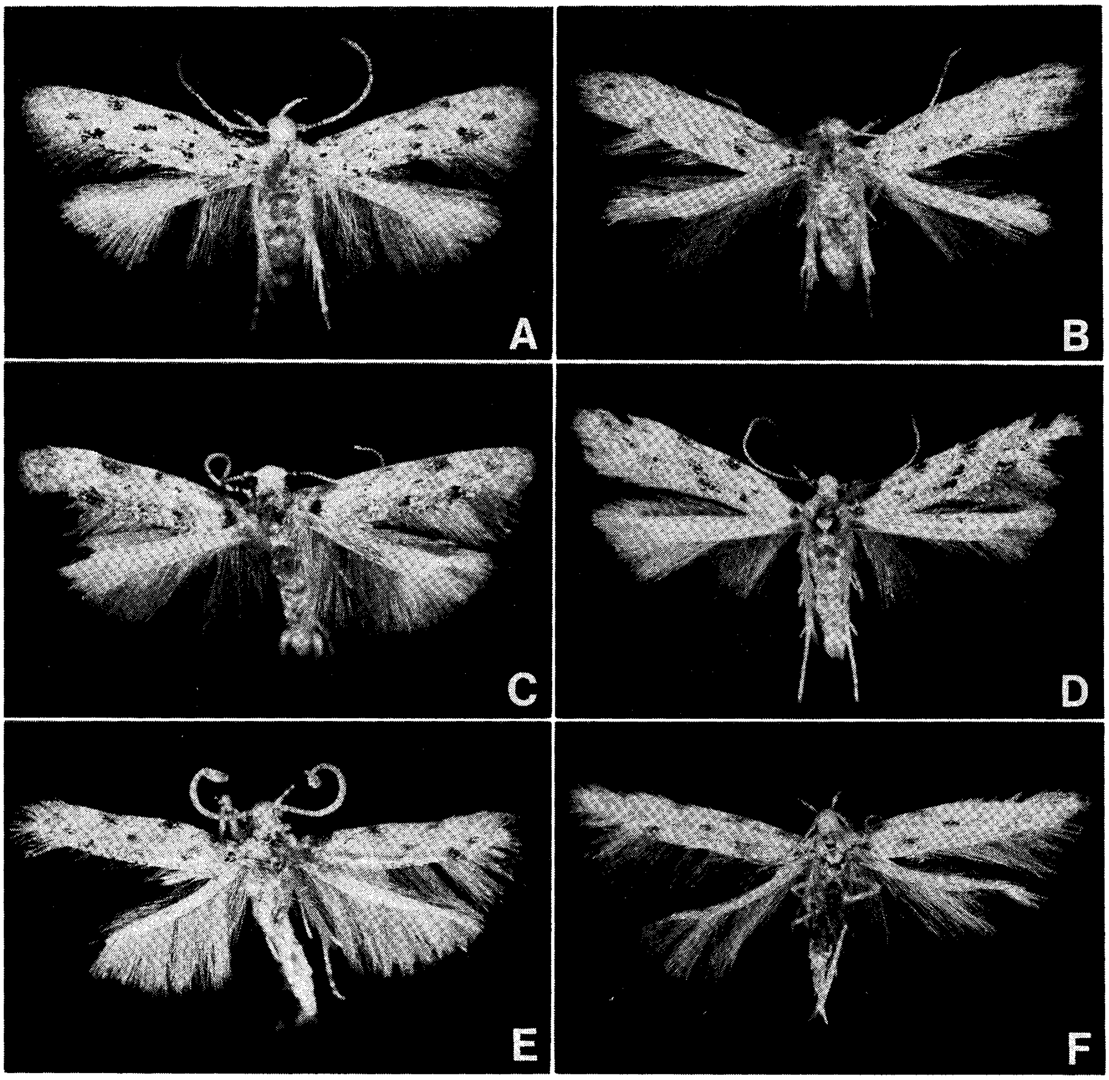

Fig. 1. A: *S. bathrodyas* MEYRICK, ♀. B: *S. kodamai* OKADA, ♀. C: *S. notomochla* MEYRICK, ♂. D: *S. robusta* sp. nov., ♂, holotype. E: *S. squamifera* sp. nov., ♂, holotype. F: *S. rectivalva* sp. nov., ♂, holotype.

Genus *Stenolechia* MEYRICK, 1894

Stenolechia MEYRICK, 1894, Entomologist's mon. Mag. **30**: 230.
Type-species: *Phalaena* (*Tinea*) *gemmella* LINNAEUS, 1758 (Subsequent designation by MEYRICK, 1925).
Poecilia HEINEMANN, 1870, Schmett. Dtl. Schweiz. **(2) 2 (1)**: 281 (nom. praeocc.).

The features which are generally known to characterize the genus are as follows.

Head smoothly scaled. Proboscis well developed. Antenna about 4/5 as long as forewing, in male simple; scape moderate, without pecten. Labial palpus long, recurved; 2nd segment covered with appressed scales above, hardly rough ones beneath; 3rd segment shorter than 2nd, slender and acute. Maxillary palpus very short, filiform, appressed to proboscis. Hind tibia clothed with hair-like scales above. In forewing R_1 from middle, R_4, R_5 and M_1 from a common stalk, R_5 to costa, M_2

rather approximated to Cula; M_3 and Culb absent, Cula from angle. Hindwing narrow-trapezoidal, apex acute and produced, termen usually emarginate; Rs and M_1 nearly parallel, M_2 curved and rather approximated to M_3; M_3, Cula and Culb remote and parallel.

In addition to these characters, the following ones are observed in common with the species of the Japanese *Stenolechia* excluding *issikiella.*

External characters: Head white to whitish ochreous, vertex covered with wide scales, a series of narrow dark scales along posterior margin of eye, fronto-clypeus with some fuscous scales near labrum. Ocellus absent. Proboscis squamose at base, nearly 3/4 as long as labial palpus. Antenna filiform; base of each flagellar segment fuscous on dorsal surface. Labial palpus slender and extending beyond vertex, whitish to whitish ochreous; 2nd segment suffused with fuscous in basal 1/2 as basal segment; apical segment with 2 fulvous or black rings near base and before apex.

Thorax usually whitish with dark fuscous markings, tegula with fuscous base. Abdomen grey above, often with whitish scales at apex, below whitish. In foreleg coxa, femur and tibia almost dark on anterior surface, 1st tarsomere with a median wide dark band; 2nd one with a basal narrow dark band; 3rd and 4th ones almost dark. In midleg femur dark on anterior surface; tibia with 2 wide dark bands on anterodorsal surface; apical spurs and 1st tarsomere with a median dark band; 2nd to 4th tarsomeres each with a basal dark band. Hindleg whitish; dark regions inconspicuous; tibia usually with 2 obscure dark bands; otherwise almost as in midleg.

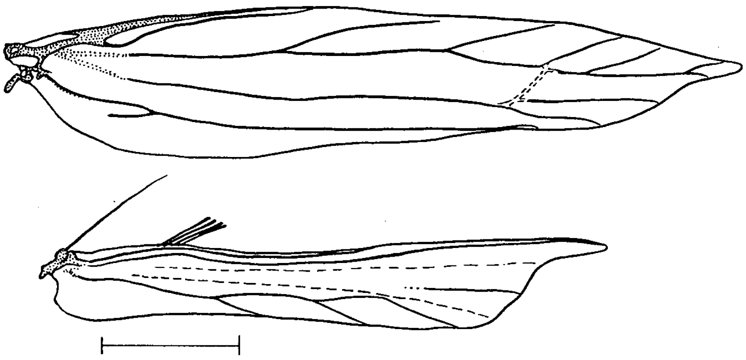

Fig. 2. Wing venation of *S. robusta* sp. nov. (Scale: 1 mm)

Hindwing trapezoidal or evenly narrowing to apex. Hindwing with short section of R_1 absent; $Sc+R_1$ ending in about 3/5 of costa; Rs running parallel to $Sc+R_1$, almost rudimentary in proximal 1/2 and ending in costa just near apex; M_1 obsolescent or absent; M_2 rudimentary near base; discocellular vein disappearing.

Forewing white to whitish ochreous, speckled with fuscous, fulvous or yellow, and with dark fuscous or black markings which are usually overlaid with some raised scales and mostly accompanied with white or fulvous various-shaped spots; cilia well developed, whitish basally and greyish distally, with irregular rows of fuscous speckles. Hindwing grey, with a tuft of specialized scales on costa near base; cilia well developed.

*Male genitalia**: Eighth tergum much reduced, or in *bathrodyas* and *kodamai*

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* The terminology was mainly referred to SHIRÔZU (1960).

absent. Eighth sternum simple in structure but greatly enlarged. Ventromedian portion of intersegmental membrane between 8th sternum and genitalia broadly sclerotized as an expansion of posteroventral margin of saccus.

Genitalia slender. Tegumen long and flattened. Fenestrula indistinct in general, almost reduced. Uncus somewhat flattened, hood-shaped, with rounded or bluntly produced posterior margin, and bearing hairs on posterolateral margins. Gnathos composed of 2 lateral slender sclerites and a ventral one. A membranous area from gnathal apex to anus bearing numerous minute cuticular processes. Vinculum forming an acute angle with tegumen in lateral view, its dorsal portion sometimes much reduced or obsolete. Saccus always present, various in size and shape, characteristically united with base of subzonal sheath of aedeagus in various degrees. Valva much specialized, its basal part being a narrow, oblique sclerite along vinculum, of which anterodorsal corner is articulated or fused with tegumen; a long, slender process of costa arising from dorsal portion of valva, and a short process of sacculus arising from ventral corner of valva, often tightly connected with saccus, and bearing hairs at tip. Phallus without coecum, fused with apex of saccus at base of subzonal sheath in various degrees as mentioned above; cornutus indistinct but seems to be composed of numerous minute spinules.

Female genitalia: Seventh abdominal segment usually normal in size, its sternum slightly shorter than tergum, with straight or emarginate posterior margin, occasionally fused with its tergum posterior to spiracle. Ostium bursae situated on intersegmental area between 7th and 8th sterna. Ductus bursae short to much long, membranous except for neighboring region of ostium bursae. Corpus bursae fusiform to spherical. One or 2 signa present and variable in shape and size. Eighth abdominal tergum membranous on dorsal area so that it is divided into a pair of lateral tergites which bear several setae on posterior margin; apophysis anterioris long; ventral portion of 8th segment sclerotized, usually more or less fused with tergites, characteristically specialized in each species, especially near ostium bursae. Papilla analis elongate, weakly sclerotized, bearing longish hairs; apophysis posterioris considerably long and fine. Ductus seminalis arising near ostium bursae.

Species group of Japanese Stenolechia: The Japanese species of the genus *Stenolechia* seem to be tentatively classified into the following three groups, each of which is composed of two species.

The *notomochla* group. This group consists of *notomochla* and *robusta*, sp. nov. The group is characterized as follows: Hindwing trapezoidal; male antennal flagellum slender and without erect sensory hairs; in the male genitalia, tegumen more or less widening posteriorly, without hair-tufts and membranous areas associated with them, vinculum well developed, saccus rather thick and tightly connected with phallus, process of costa arising from middle of valva, thick basally, evenly arcuate ventrally, process of sacculus thick, phallus strongly arcuate ventrally, without apical spine-like projection, with subzonal sheath almost erect, sclerite on fenestrula area with anterolateral extensions broad and rather short, uncus broad and bearing a few long lateral setae; in the female genitalia ductus bursae long, a pair of signa each produced into rather compressed, tapered, process striated and marginally serrate; female 7th abdominal tergum separated from its sternum by lateral membranous areas.

The *bathrodyas* group. This group consists of *bathrodyas* and *kodamai.* The group is characterized as follows: Hindwing trapezoidal; male antennal flagellum with erect sensory hairs; in the male genitalia, tegumen evenly narrow posteriorly, bearing a pair of long hair-tufts from broad membranous areas at basal portion, vinculum well developed, saccus short, flattened and weakly connected with phallus, process of costa arising from anterodorsal corner of valva, slender even at base, weakly arcuate ventrally, process of sacculus long, slender and curved posteroventrally, phallus slender, arcuate ventrally, with subzonal sheath directing posteriorly, with apical portion of aedeagus ending in a sharply pointed spine-like process, sclerite on fenestrula area with short anterolateral extensions tapered anteriorly, uncus widest beyond the middle, truncate apically, with sparse longish hairs laterally; in the female genitalia, sclerotized funnel-like genital cavity formed around ostium bursae, ductus bursae extremely long, slender, sinuate in S-shape, a pair of signa, each with a much compressed, blade-like process roughly crested; female 7th abdominal tergum fused with its sternum posterior to spiracle.

The *rectivalva* group. This group consists of *squamifera* sp. nov. and *rectivalva* sp. nov. The group is characterized as follows: Hindwing lanceolate; male antennal flagellum with or without erect sensory hairs; in the male genitalia, tegumen evenly narrow posteriorly, without hair-tufts and membranous areas associated with them, vinculum almost membranized, saccus short or moderately long, but much thin, process of costa arising from anterodorsal corner of valva, slender throughout its length, straight or weakly sinuate dorsally, process of sacculus short, phallus short, almost straight or subzonal sheath strongly curved ventrally, sclerite of fenestrula area with long, narrow anterolateral extensions, uncus densely clothed with long setae laterally; in the female genitalia, ductus bursae short; one large U-shaped signum or a pair of large, keeled signa present; female 7th abdominal tergum separated from its sternum by lateral membranous areas.

Key to the Japanese Species of the Genus *Stenolechia* Based on the External Characters

1. Hindwing evenly narrowed apically, so anal angle not obviously formed 2

— Hindwing trapezoidal as seen in general and anal angle formed 3

2. Head whitish ochreous with distinct fuscous speckles above, as most of dorsal scales marked with a brown subapical band; mesonotum with a pair of small fuscous anterior spots and a large fuscous posterior suffusion on dorsal surface; male flagellum thick, densely and entirely bearing short fine erect sensory hairs .... *squamifera* sp. nov.

— Head pure white and without dark speckles above, as dorsal scales being unicolorous white; mesonotum only with a large dark fuscous central suffusion on dorsal surface; male flagellum rather slender, without erect sensory hairs .... *rectivalva* sp. nov.

3. Smaller-sized species, length of forewing 2.9–3.7 mm; male flagellum thick,

sparsely bearing short fine erect sensory hairs 4

— Larger-sized species, length of forewing 4.2–5.9 mm; male flagellum slender, without erect sensory hairs 5

4. Forewing scattered with yellow scales; head whitish ochreous above, without distinct speckles .... *bathrodyas* MEYRICK

— Forewing without yellow scales; head whitish ochreous above, with distinct fuscous speckles .... *kodamai* OKADA

5. Head white above, with a few distinct fuscous speckles; forewing ash grey in ground colour; length of forewing 4.5–5.9 mm .... *robusta* sp. nov.

— Head whitish ochreous to ochreous above, at most with indistinct fulvous speckles; forewing ochreous grey in ground colour; length of forewing 4.2–5.0 mm .... *notomochla* MEYRICK

Key to the Japanese Species of the Genus *Stenolechia* Based on the Male Genitalia and Pregenital Segment

1. Eighth abdominal tergum absent; tegumen with a pair of hair-tufts 2

— Eighth abdominal tergum present; tegumen without hair-tufts 3

2. Costa much elongate, with its apex extending posteriorly beyond apex of sacculus; processes of sacculi almost parallel with each other ....*bathrodyas* MEYRICK

— Costa short, not reaching to apex of sacculus; processes of sacculi crossed each other in ventral view .... *kodamai* OKADA

3. Anellus without processes, posterior margin of uncus truncate or rounded; saccus rather flattened, fused with proximal end of subzonal sheath of phallus 4

— Anellus with a pair of sharply pointed processes; posterior margin of uncus roundly produced; saccus almost trigonal in cross section, fused with entire subzonal sheath of phallus.. *notomochla* MEYRICK

4. Uncus without scale-like setae; aedeagus curved ventrally or almost straight; process of sacculus very short 5

— Uncus with scale-like setae on ventrodistal surface; base of aedeagus bisinuate; process of sacculus comparatively long ....*squamifera* sp. nov.

5. Uncus wider than long, truncate apically in dorsal view; tegumen greatly dilated at distal 1/4; process of costa long and curved, extending to base of uncus; aedeagus very long, strongly curved ventrally, almost as long as tegumen; vinculum present .... *robusta* sp. nov.

— Uncus longer than wide, rounded apically in dorsal view; tegumen evenly tapering posteriorly; process of costa short and straight, ending in proximal to subapical portion of tegumen; aedeagus very short and straight, 1/2 as long as tegumen; vinculum absent .... *rectivalva* sp. nov.

Key to the Japanese Species of the Genus *Stenolechia* Based on the Female Genitalia

1. Corpus bursae with a pair of signa; 8th tergite large, longer than wide........... 2

— Corpus bursae with single signum, which is a U-shaped slender scobinate band, tuberculate at posterior 1/3 of each arm; 8th tergite transversely very narrow. Eighth sternum weakly sclerotized, reticulately wrinkled ......*rectivalva* sp. nov.

2. Eighth abdominal segment without rod-like apodemes besides apophyses posteriores; signum comparatively small, its basal plate much shorter than 1/2 length of corpus bursae 3

— Eighth abdominal segment with a pair of rod-like apodemes anterolaterally on its sternum in addition to apophyses posteriores; signum conspicuously large, slightly shorter than corpus bursae, and with a wide, anteriorly truncate keel, and pointed posteriorly ....*squamifera* sp. nov.

3. Ostium bursae forming a wide, funnel-like, sclerotized, copulatory cavity on anterior portion of 8th sternum; signum with a strongly compressed blade-like process on wide round basal plate 4

— Ostium bursae without a wide, funnel-like, sclerotized, copulatory cavity on anterior portion of 8th sternum; signum with a long, conical, weakly compressed, spine-like process on narrow basal plates 5

4. Eighth sternum almost parallel-sided, with rather truncate posterior margin ....*kodamai* OKADA

— Eighth sternum distinctly narrowed posteriorly, with narrow, rounded posterior marginal area ....*bathrodyas* MEYRICK

5. Eighth abdominal sternum represented by an elongate sclerite having a pair of apically tapered, large apodemal processes invaginated from its anterior margin; process of signum about 2 times as long as basal plate..............*robusta* sp. nov.

— Eighth abdominal sternum broad, but divided into lateral sternites by a ventromedian membranous furrow, the sternum having a pair of apically rounded, short apodemal processes invaginated from its anterior submargin; process of signum nearly as long as basal plate ....*notomochla* MEYRICK

Stenolechia bathrodyas MEYRICK, 1935

(Figs. 1A, 3, 4A–D)

Stenolechia bathrodyas MERYICK, 1935, Exot. Microlep. **4**: 583; GAEDE, 1937, Lep. Catal. Gelechiidae **79**: 90; INOUE, 1954, Check List Lep. Japan, **1**: 66; OKADA, 1962, Pab., Ent. Lab., Univ. Osaka Pref. (**7**): 33.

Stenolechia bathrodyas: CLARKE, 1969, Catal. of the Type Specimens of Microlep. in the Brit. Mus. (Nat. Hist.) described by MEYRICK **7**: 387.

Male genitalia: Eighth tergum absent; 8th sternum covering uncus in normal situation. A pair of coremata situated between 7th tergum and genitalia, each represented by a dense brush of long, narrow, hair-like scales in a membranous sac which opens posteriorly and invaginates deeply into anterior segments of abdomen. Sclerotized extension from posteroventral portion of saccus slender, isosceles triangular.

Tegumen slender, about 4 times as long as uncus, tapered in basal 1/2, slightly spatulate in apical 1/2, ending in obtuse margin, and bearing a pair of tufts on basal membranous areas so that anterior 1/2 of tegumen with 2 lateral broad troughs sep-

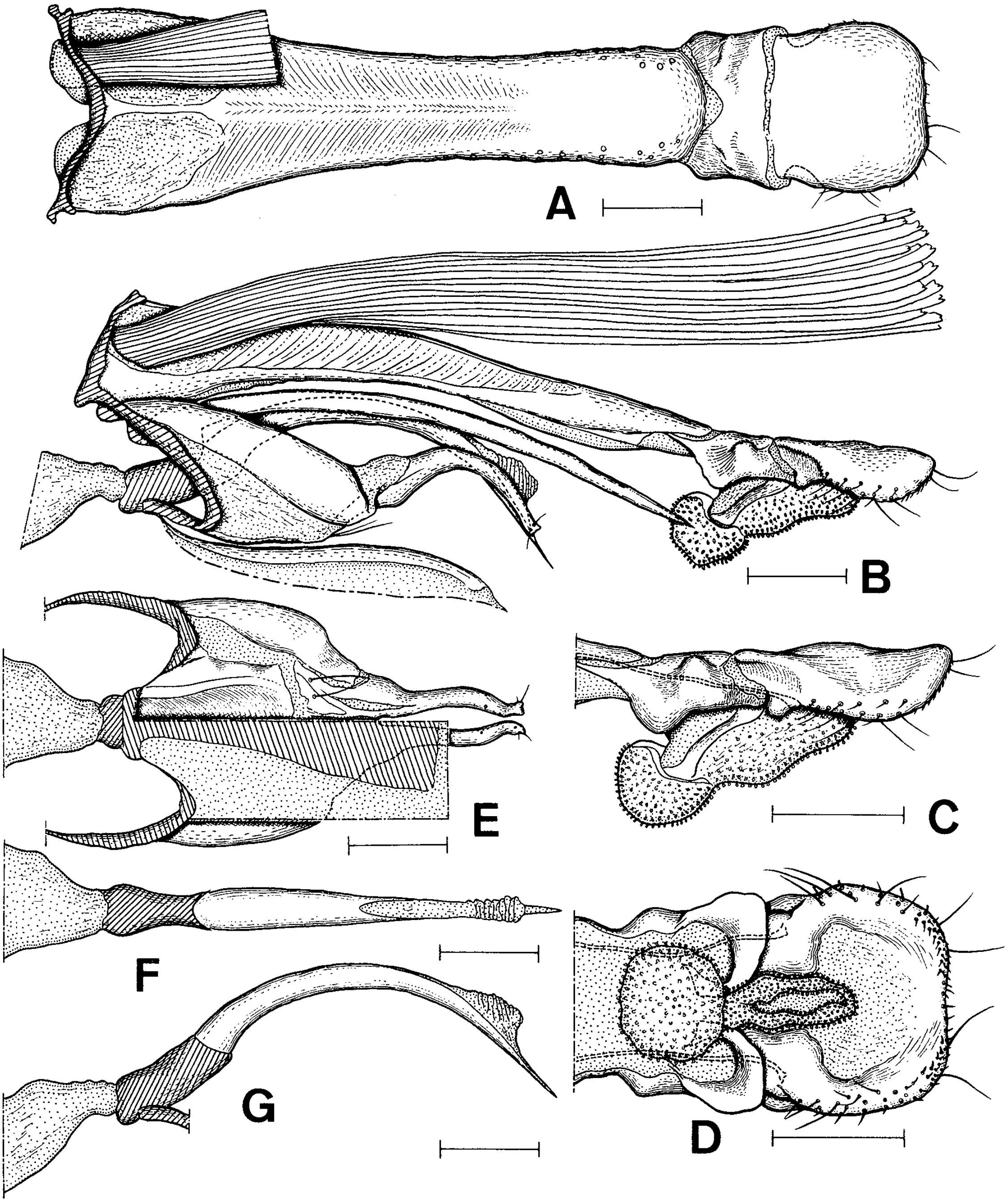

Fig. 3. Male genitalia of *S. bathrodyas* MEYRICK. A: Dorsum in dorsal view (excluding left tuft). B: Genitalia in lateral view. C: Uncus and gnathos in lateral view. D: Ditto in ventral view. E: Saccus and sacculus in ventral view. F: Phallus in dorsal view. G: Ditto in lateral view. (Scale: 0.1 mm)

arated by a median longitudinal ridge on dorsal surface; pedunculus conspicuously short and thick, with narrow lapel (acrotergite). Region of fenestrula wide, almost square in dorsal view, slightly winged at sides, and articulated to tegumen and uncus respectively. Uncus much flattened, almost square and as long as wide in dorsal view, with sparese hairs on lateral to posterior margins, with posterior margin slightly concave. Gnathos rather shorter than uncus; its lateral sclerite slender and slightly curved laterally; ventral sclerite slender and emarginate at centre. Sclerotized granules on membrane from surrounding area of anus to gnathos conspicuously developed into stalked papillae. Vinculum narrow, rather well lapelled along anterior margin. Saccus very short; its connection with aedeagus moderately strong. Membranous zone between vinculum and valva broad and subtriangular. Costa (of valva) so elongate as to reach to subapical portion of tegumen, ventrally articulated with valva (*s. s.*) at one point, with a club-shaped base, slightly curved ventrally ending in a pointed tip; sacculus about 0.4 times as long as costa, processes of sacculi parallel with each other in ventral view, evenly tapered towards apex, and bearing several hairs on ventral surface near base, one hair on inner side at distal 1/6 and 2 hairs on outerventral surface of subapical portion. Aedeagus rather long and thin, about 3/4 as long as tegumen; subzonal sheath relatively short and almost cylindrical; suprazonal sheath strongly curved ventrally, gradually tapering towards a sharply pointed tip, with dorsal area of distal 1/2 membranous; cornutus indistinct.

Female genitalia: Seventh abdominal sternum weakly emarginate posteriorly, fused with its tergum posterior to spiracle. Eighth abdominal segment rather slender; each of divided 8th tergites 1.6 times as long as basally thick in lateral aspect, with a distinct longitudinal furrow obliquely running from base of apophysis anterioris to posterolateral corner, bearing 4–5 short setae on posterior margin, and forming apophysis anterioris nearly as long as 8th tergite; 8th sternum oblong, evenly narrowing to roundly produced posterior margin, distinctly separated posteriorly from tergite by a narrow membranous area which is alternated by a ridge anteriorly, the sternum deeply concave anteriorly and participated in forming the copulatory cavity. Ostium bursae sclerotized to form a large, funnel-like copulatory cavity situated on anterior portion of 8th sternum; ductus bursae long and slender, about 1.3 times as long as apophysis posterioris, evenly and weakly dilated to corpus bursae, curved ventrally at posterior 2/5, and strongly curved dorsally for anterior 1/3 as to roll corpus bursae; corpus bursae almost spherical, but slightly longer than wide, about 0.3 times as long as ductus bursae; a pair of small signa situated on posterior part of corpus bursae; each signum consisting of basal plate almost rounded and irregularly scobinated, and an apically tapered, strongly compressed, blade-like process crested on posterior margin. Apophysis posterioris conspicuously long, about 4.3 times as long as apophysis anterioris.

Distribution: Honshu, Kyushu.

Specimens examined: [HONSHU] 1♂, Totori, Sennan-gun, Osaka Pref., 21. v. 1977 (H. KUROKO). [KYUSHU] 1♀, Hakozaki, Fukuoka City, em. 29. viii. 1980 (I. KANAZAWA); 1♂, same locality and collector, em. 1. ix. 1980; 1♂1♀, same locality and collector, 2. ix. 1980; 6♂, Kumamoto City, em. 30. vi. 1962 (Z. KURANAGA).

Remarks: *S. bathrodyas* is closely related to *kodamai* evidently and these two species form a species-group characterized in the male by the possession of two pairs of tufts on the apical portion of abdomen, the absence of 8th abdominal tergum and the conspicuously short pedunculus in the genitalia, and in the female by the funnel-like copulatory cavity. Moreover the larvae of the two species have a preference for conifers in contrast with the boring habit in shoots of *Quercus* found in most species of the genus *Stenolechia*.

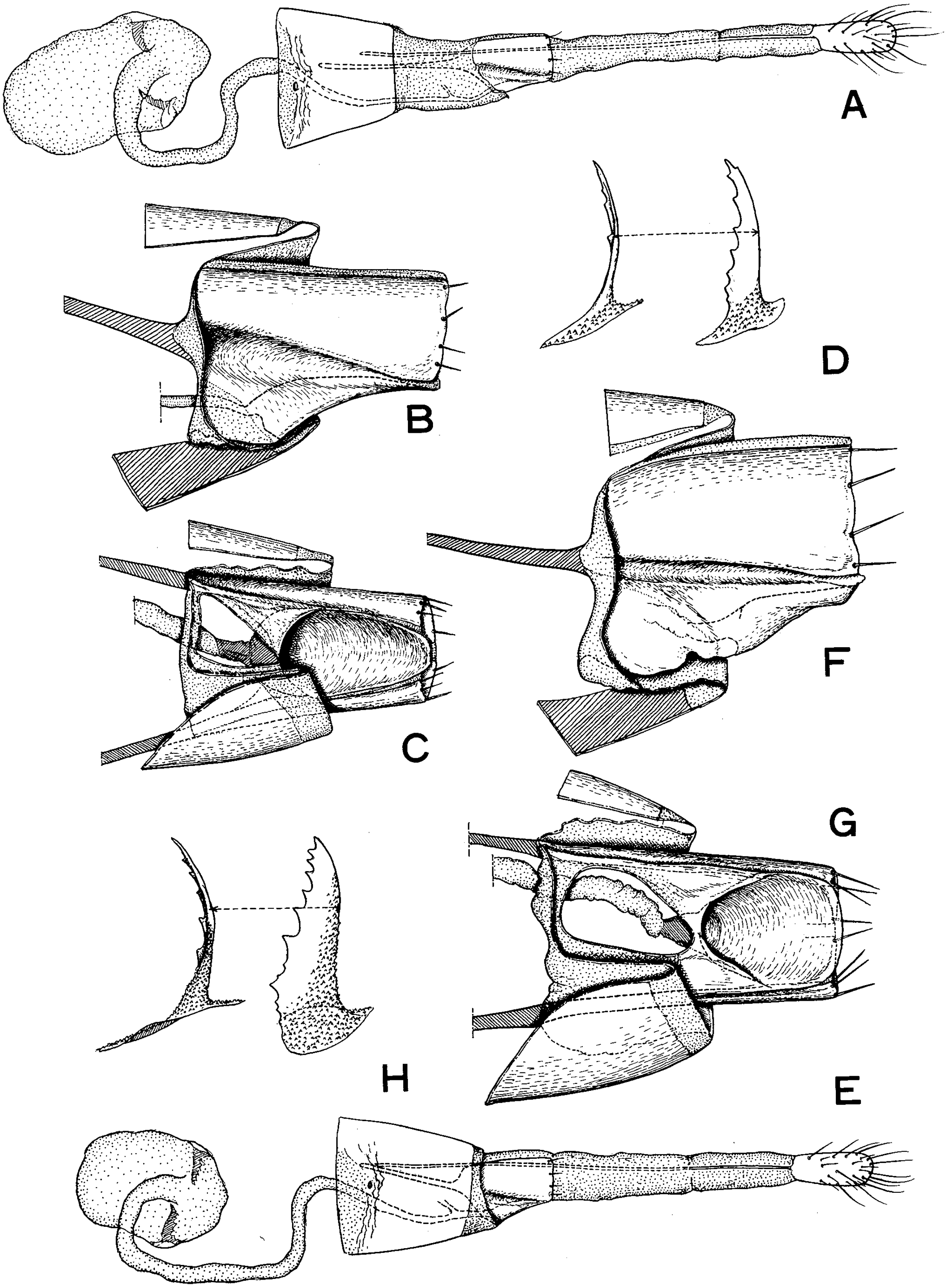

Fig. 4. Female genitalia of *Stenolechia* species. A: *S. bathrodyas* MEYRICK, in lateral view. B: Ditto, ostium in lateral view. C: Ditto in ventral view. D: Ditto, signum. E: *S. kodamai* OKADA, in lateral view. F: Ditto, ostium in lateral view. G: Ditto in ventral view. H: Ditto, signum.

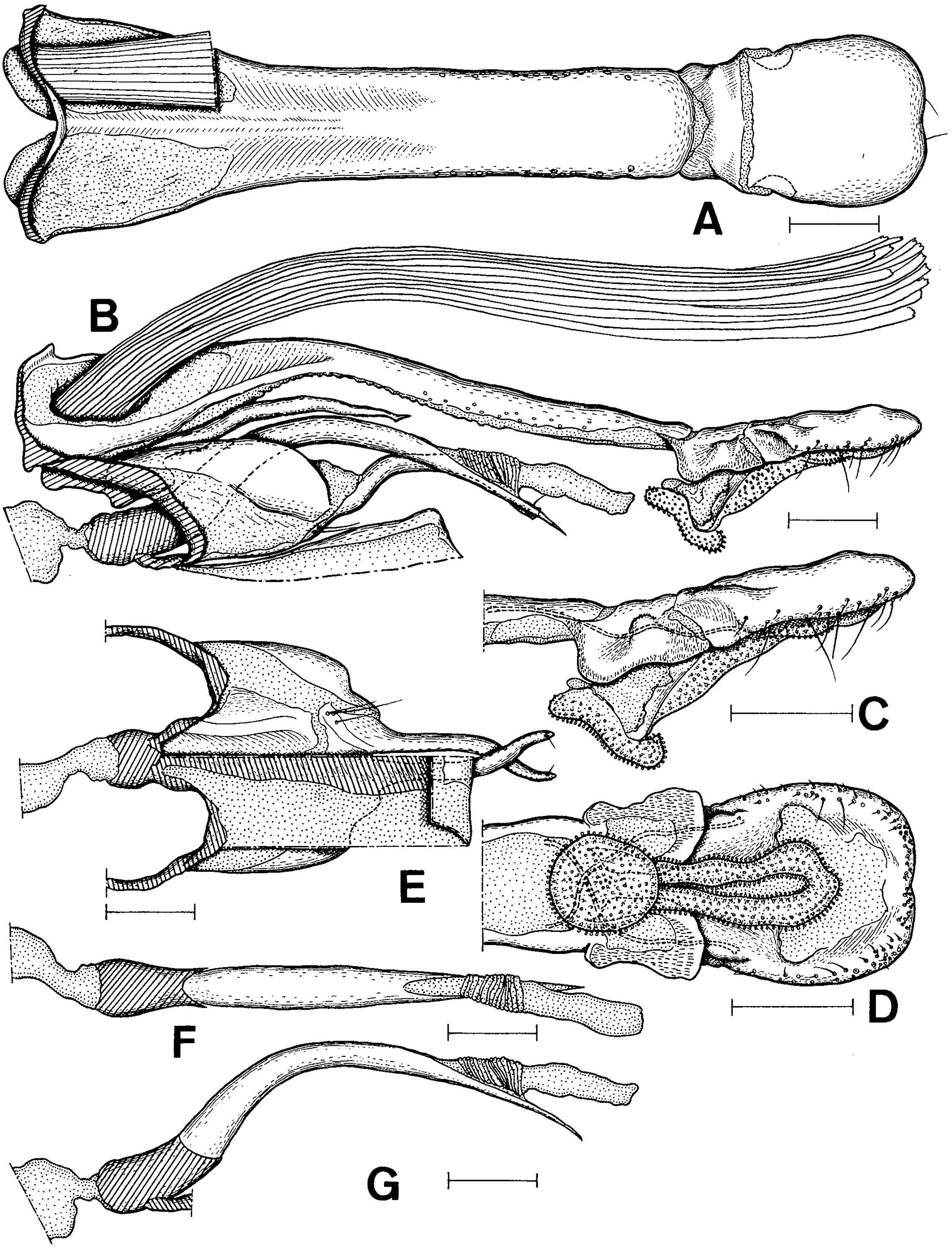

Fig. 5. Male genitalia of *S. kodamai* OKADA. A: Dorsum in dorsal view (excluding left tuft). B: Genitalia in lateral view. C: Uncus and gnathos in lateral view. D: Ditto in ventral view. E: Saccus and sacculus in ventral view. F: Phallus in dorsal view. G: Ditto in lateral view. (Scale: 0.1 mm)

It is well known that the larvae of *S. bathrodyas* mine the leaves of *Juniperus chinensis* LINNAEUS. I newly record *J. chinensis* L. var. *procumbens* (SIEB.) ENDL. as a host plant which the aforementioned specimens from Kumamoto were reared with. OKADA (1962) studied the morphology and biology of immature stages of this species.

Stenolechia kodamai OKADA, 1962

(Figs. 1B, 4E–H, 5)

Stenolechia kodamai OKADA, 1962, Pub., Ent. Lab., Univ. Osaka Pref. (7): 32.

S. kodamai is most closely related to *bathrodyas* among the Japanese species and almost identical with it in every character except for the following differences. Head covered above with whitish ochreous scales, some of which are fuscous on apical portion, so that head distinctly speckled in *kodamai* (uniformly whitish ochreous, whithout distinct speckles in *bathrodyas*); forewing without yellow scales in *kodamai* (speckled with yellow scales in *bathrodyas*); male genitalia with processes of sacculi crossed each other and pointed apically, and with processes of costae short, extending at middle of tegumen in *kodamai* (processes of sacculi almost parallel with each other, slightly converging subapically, and processes of costate long, extending to subapical portion of tegumen in *bathrodyas*); female 8th abdominal sternum broader, almost parallel-sided, with rather truncate posterior margin in *kodamai* (long and distinctly narrowed posteriorly with narrow, rounded posterior margin in *bathrodyas*).

Distribution: Honshu.

Specimens examined: [HONSHU] 1♂, Shimokuriyagawa, Morioka City, 25. vi. 1980(I. KANAZAWA); 1♂3♀, Mt. Makiosan, Osaka Pref., 13. viii. 1979 (K. YASUDA); 1♀, Takanoko, Yamaguchi Pref., em. 6. v. 1957 (T. KODAMA).

Remarks: In the original description OKADA (1962) recorded the morphology and biology of its immature stages. According to him, the larvae of this species mine the leaves of *Pinus densiflora* SIEB. et ZUCC.

Stenolechia notomochla MEYRICK, 1935

(Figs. 1C, 6, 7A–D)

Stenolechia notomochla MEYRICK, 1935, Exot. Microlep. **4**: 583; GAEDE, 1937, Lep. Catal. Gelechiidae **79**: 91; INOUE, 1954, Check List Lep. Japan, **1**: 65; OKADA, 1961, Trans. Shikoku Ent. Soc. **7** (1–2): 47; CLARKE, 1969, Catal. of the Type Specimens of Microlep. in the Brit. Mus. (Nat. Hist.) described by MEYRICK **7**: 387.

Male genitalia: Eighth sternum longer than 5 times length of 8th tergum, but not covering uncus in normal situation. Sclerotized extension from posteroventral portion of saccus broad and reaching to apex of saccular process.

Tegumen about 4 times as long as uncus, narrowest near middle, then gently dilated posteriorly and widest at apical 5/6; pedunculus rather short and moderately thick, with small lapel in anterior margin. Region of fenestrula almost square in dorsal view, slightly winged in basal 1/2. Uncus thick, rather longer than wide, parallel-sided on basal 1/2, then tapering towards bluntly pointed apex in dorsal view,

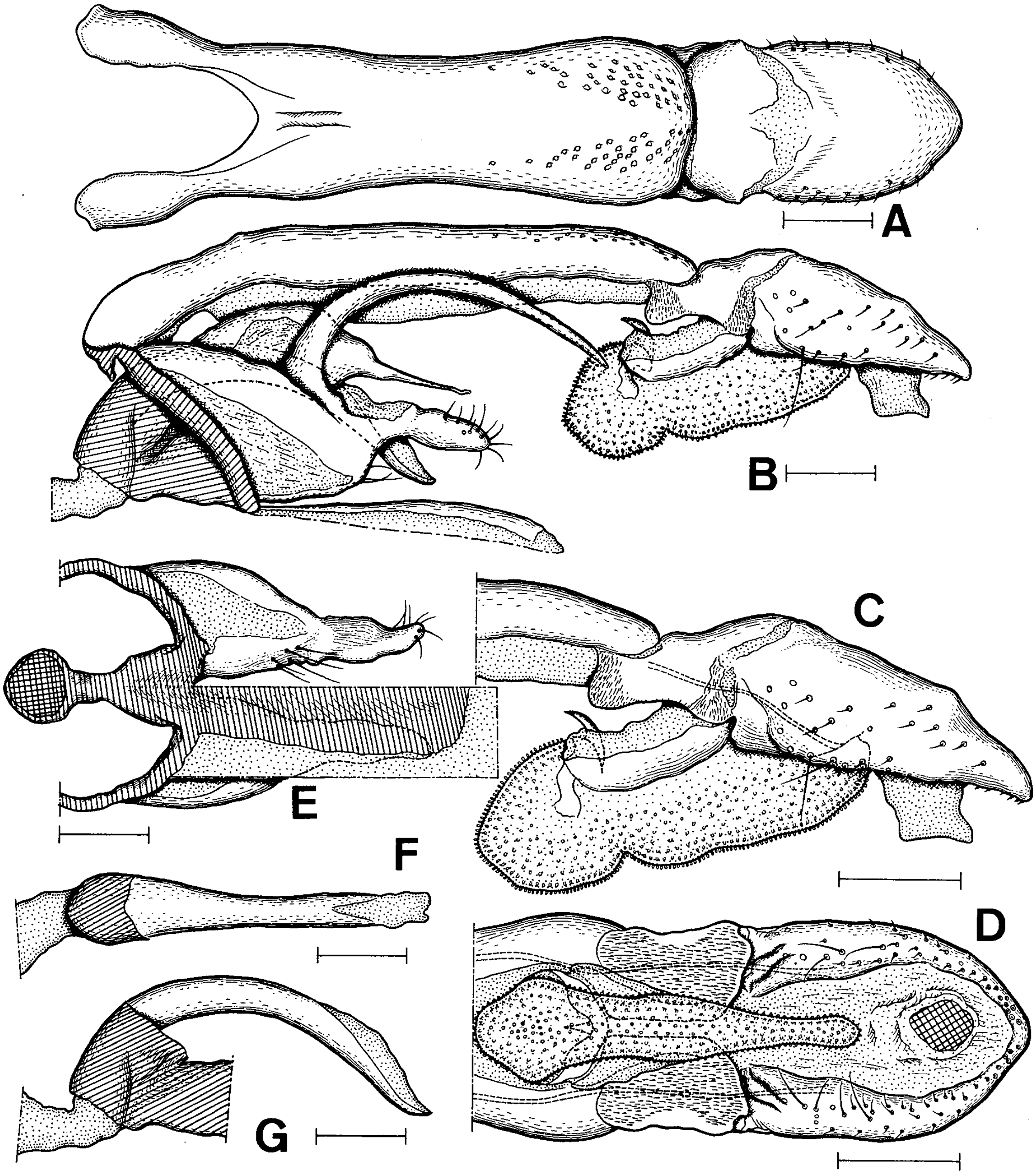

Fig. 6. Male genitalia of *S. notomochla* MEYRICK. A: Dorsum in dorsal view. B: Genitalia in lateral view. C: Uncus and gnathos in lateral view. D: Ditto in ventral view. E: Saccus and sacculus in ventral view. F: Phallus in dorsal view. G: Ditto in lateral view. (Scale: 0.1 mm)

sparsely clothed with short hairs on lateral surface which become longer towards base, also with short bristles in ventral margin near apex. Gnathos almost as long as uncus; lateral sclerite slender and straight in lateral view; ventral sclerite with a ventrally bending, acute, median projection and 2 small round lateral projections. Sclerotized granules on membrane from anus to apex of gnathos well developed into stalked papillae. Vinculum narrowly lapelled along anterior margin. Anellus characteristically with a pair of sclerotized lobes near base of costa, the lobe extending posteriorly as a slender process tapering towards a sharply pointed tip. Saccus very thick, not so

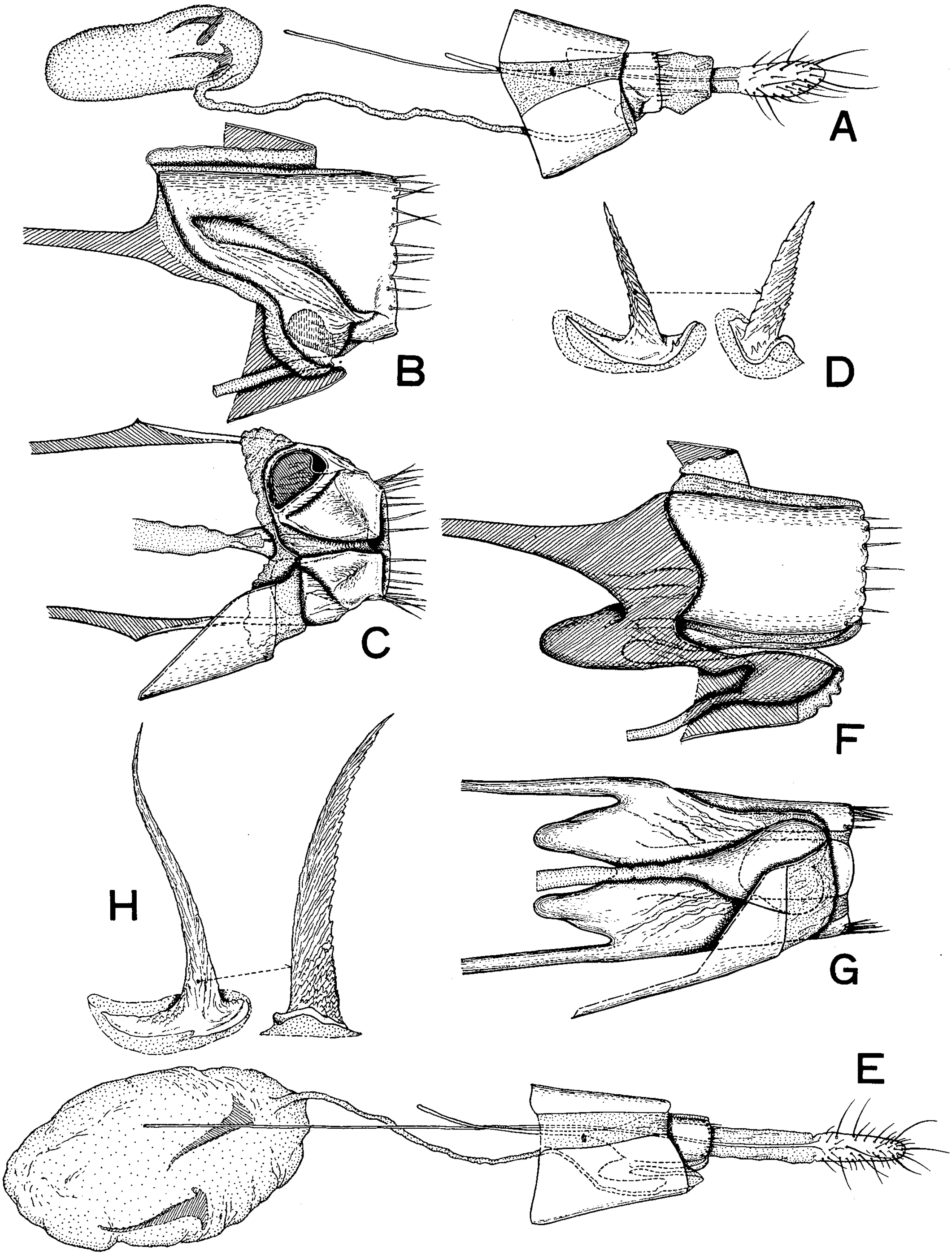

Fig. 7. Female genitalia of *Stenolechia* species. A: *S. notomochla* MEYRICK, in lateral view. B: Ditto, ostium in lateral view. C: Ditto in ventral view. D: Ditto, signum. E: *S. robusta* sp. nov., in lateral view. F: Ditto, ostium in lateral view. G: Ditto in ventral view. H: Ditto, signum.

long and almost trigonal in cross section; its connection with phallus conspicuously tight. Membranous zone between vinculum and valva broad, triangular. Process of costa moderately long, tightly fused with valva basally, directed dorsally at base and then recurved ventrally, evenly tapered towards a pointed tip which reaches near apex of gnathos; process of sacculus relatively long and thick, bearing some hairs on inner ventral side at middle and several shorter ones at obtuse apex. Aedeagus moderately long and thick, about 1/2 as long as tegumen, almost cylindrical; subzonal sheath rather short, directing posterodorsally, fused with saccus for its almost entire length; suprazonal sheath gently curved ventrally, ending in a pointed tip, with its dorsal area membranous for distal 1/3.

Female genitalia: Seventh abdominal sternum having almost straight posterior margin and concealing ostium bursae. Eighth abdominal segment moderately long and stout; 8th tergite fused with 8th sternite, rather broad, bearing some 10 setae along posterior margin, having an oblique longitudinal furrow which is accompanied with a distinct keel along its ventral border, apophysis anterioris invaginated from anterolateral portion of 8th tergite, 1.2 times as long as 8th tergite; 8th sternum divided into a pair of lateral sternites by a narrow ventromedian membranous furrow, each sternite invaginated on anterior submargin into an apodemal process which is short, broad, and apically rounded; ventral area of intersegmental membrane between 7th and 8th segments also invaginated into a short, stout, apically tapered membranous lobes. Ostium bursae rather small, weakly sclerotized and situated on flexed portion of the intersegmental membrane; ductus bursae extremely long, almost as long as apophysis posterioris, almost straight for posterior 3/4, strongly recurved posteriorly on anterior 1/4; corpus bursae fusiform, rather slender, slightly longer than 1/2 length of ductus bursae, with a pair of signa which are situated symmetrically to base of ductus bursae on posterior part of corpus bursae; signum rather small, its basal plate with irregular spinules, free process short, nearly as long as basal plate, almost straight, more or less flattened, obliquely striated and along posterior margin minutely serrate. Apophysis posterioris about 4 times as long as apophysis anterioris.

Distribution: Honshu, Kyushu, Tsushima Is.

Specimens examined: [HONSHU] 1♀, Shimokuriyagawa, Morioka City, Iwate Pref., 25. vi. 1980 (I. KANAZAWA); 3♂, Kukumo, Masuda City, Shimane Pref., 1. vi. 1980 (I. KANAZAWA). [KYUSHU] 1♂, Mt. Hikosan, Fukuoka Pref., 21. vi. 1979 (I. KANAZAWA); 1♀, same locality and collector, 22. vi. 1979; 1♂, same locality and collector, 12. vii. 1979; 1♂, same locality and collector, 13. vii. 1979; 7♀, Chôjabaru, Kujû-machi, Ôita Pref., 19. vii. 1979 (I. KANAZAWA). [TSUSHIMA] 4♂, Mt. Ôkumayama, Kamiagata-machi, 30. v. 1979 (I. KANAZAWA); 3♂, Mt. Ariakeyama, Izuhara-machi, 1. vi. 1979 (I. KANAZAWA).

Remarks: MEYRICK (1935) noted that *S. notomochla* is very similar to the Indian species, *S. orsicoma* MEYRICK, which I have never examined. This species is most similar to *robusta* among the Japanese species and shares with it the posterodorsally dilated tegumen, the ventrally curving costa and the erect subzonal sheath of the aedeagus of the male genitalia. It differs from *robusta* in the male genitalia by the anellus possessing a pair of sclerotized processes.

The larvae of this species feed in the shoots of *Quercus dentata* THUNB. in spring (Dr. F. KOMAI, personal communication).

Stenolechia robusta sp. nov.

(Figs. 1D, 2, 7E–H, 8)

Head white above, fuscous speckled by a few subapically darkened scales. Antenna about 7/11 length of forewing; scape with an obscure fuscous band near apex; basal 1–2 flagellar segments almost dark fuscous; in male flagellum slender, without erect sensory hairs. Labial palpus almost white in ground colour.

Thorax white to whitish ochreous and scattered with fuscous scales, with a dark fuscous spot on mesoscutellum; tegula whitish ochreous. Abdomen grey above with whitish scales on posterior end of each segment, below white, with ochreous scales apically; an inner pocket containing several modified scales between 3rd and 4th terga as in *notomochla*. Legs whitish ochreous.

Forewing 4.5–5.9 mm in length, ash grey, speckled with fuscous scales, marked with the following dark fuscous spots; 3 large spots on costa, each near base, at 2/5 and 3/5; a medium-sized spot near base beneath fold, a small spot at 1/3 beneath fold; 2 medium-sized spots on fold, each at 2/3 and distal end; cilia white with a row of dark fuscous speckles at 1/2 and two rows of fuscous speckles near distal end. Hindwing almost trapezoidal.

Male genitalia: Eighth sternum nearly 5 times as long as 8th tergum, but not covering uncus in normal situation. Sclerotized extension from posteroventral portion of saccus short, V-shaped.

Tegumen about 5 times as long as uncus, rather broad and flattened, slightly curved downwards distally, tapered in basal 1/2, broadly spatulate in posterior 1/2, without hair-tufts and membranous spots; pedunculus moderately long and relatively thick. Region of fenestrula trapezoidal in dorsal view. Uncus flattened, almost round, 2 times as wide as long, widest at the middle in dorsal view, with sparse short hairs posteriorly and several long hairs laterally; viewed laterally apex of uncus rounded, and ventrally with a pair of triangular projections bearing a dense group of about 20 short spinules. Gnathos almost as long as uncus; lateral sclerite relatively thick and recurved anterodorsally; ventral sclerite almost rhombic in ventral view, with a rather long, ventrally curved, median projection. Sclerotized granules rather well developed but restricted on narrow membranous zones near base of gnathos. Vinculum narrow, narrowly lapelled along anterior margin. Saccus long, in ventral view broad in basal 1/2 and abruptly narrowing in distal 1/2, in lateral view gradually tapering anteriorly; its connection with phallus comparatively strong but restricted at anterior end of subzonal sheath. Membranous zone between vinculum and valva not so broad, subtriangular in lateral view. Costa long, tightly fused with valva, relatively wide and dorsally directed in basal portion; its distal portion evenly tapering and curved posteroventrally, and ending in a sharply pointed tip which reaches basal portion of uncus; process of sacculus conspicuously short and thick, bearing many hairs near obtuse apex. Aedeagus conspicuously long, slender, about as long as tegumen and

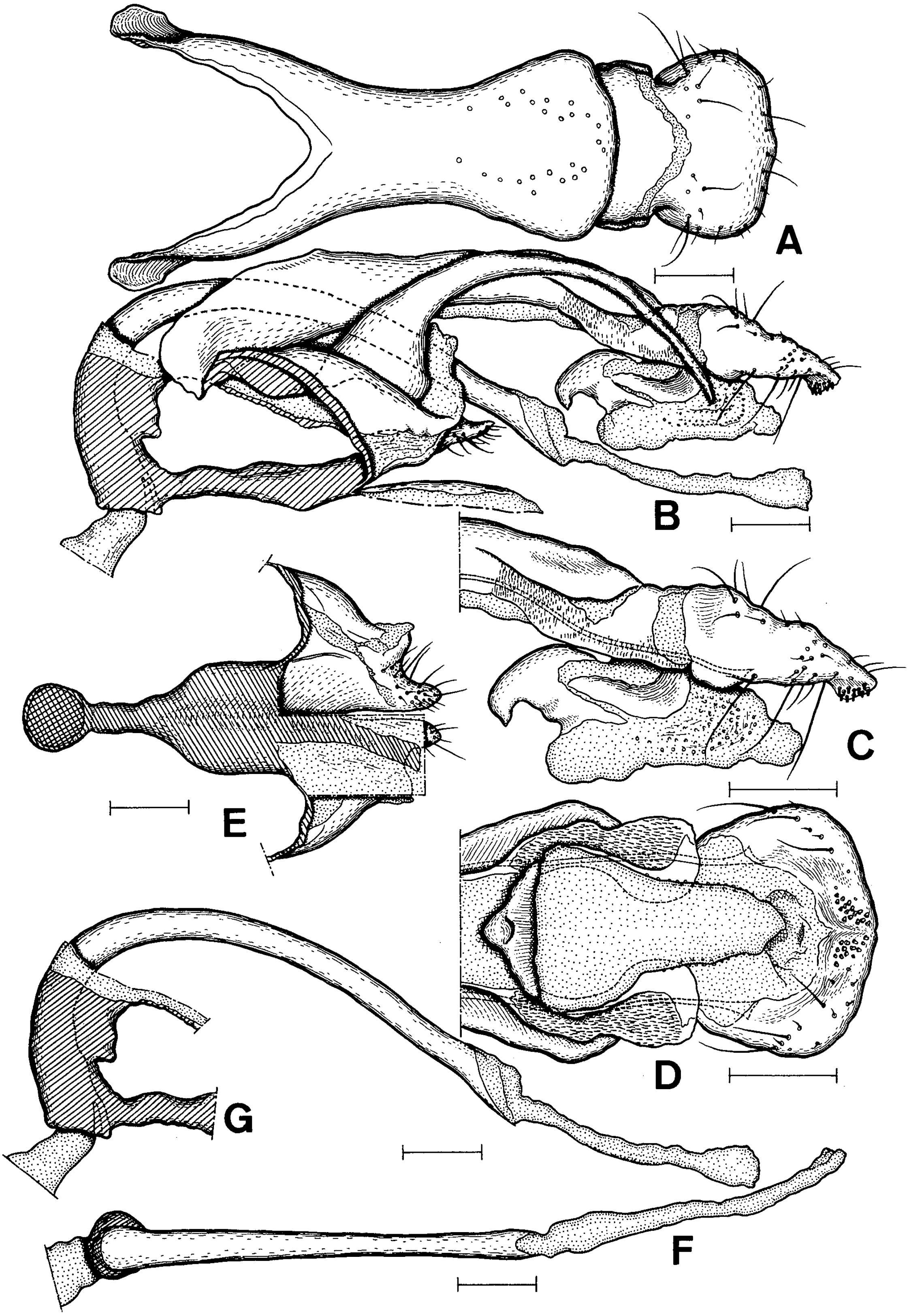

Fig. 8. Male genitalia of *S. robusta* sp. nov. A: Dorsum in dorsal view. B: Genitalia in lateral view. C: Uncus and gnathos in lateral view. D: Ditto in ventral view. E: Saccus and sacculus in ventral view. F: Phallus in dorsal view. G: Ditto in lateral view. (Scale: 0.1 mm)

strongly curved ventrally on basal 1/2; subzonal sheath very short, directed dorsally, much thicker than aedeagus, manica narrowly sclerotized ventromedially; suprazonal sheath strongly bending ventrally near zone, dorsally membranous near tip; cornutus composed of numerous minute spinules.

Female genitalia: Seventh abdominal sternum truncate posteriorly, covering ostium bursae. Eighth abdominal segment rather slender; each of divided 8th tergites quadrate, nearly 2 times as long as wide in lateral aspect, bearing several short setae along almost straight posterior margin, forming a long apophysis anterioris, which is about 2 times as long as 8th tergite and invaginated from the middle of its anterior margin; 8th sternum rather narrow, separated from each of its tergites by a narrow membranous area for a long distance from posterior margin of the segment to base of apophysis anterioris, a pair of short stout apodemal processes invaginated at subventral portions of anterior margin of 8th sternum. Ostium bursae situated on posterior portion of broadly sclerotized intersegmental area, entirely sclerotized and cup-like, concealed by 8th sternum; ductus bursae long and slender, slightly curved dorsally, evenly and weakly dilated to corpus bursae, about 1.3 times as long as apophysis posterioris; corpus bursae almost fusiform, 0.4 times as long as ductus bursae, with a pair of signa on posterior portion; signum similar to that of *notomochla*, but distinctly longer, its free process 2 times as long as basal plate, distinctly sinuate. Apophysis posterioris slightly longer than 3 times length of apophysis anterioris.

Distribution: Tsushima Is.

Holotype ♂ (Type No. 2470, Kyushu Univ.), Mt. Mokkokuyama, Izuhara-machi, Tsushima Is., 15. x. 1983 (I. KANAZAWA).

Paratypes: [TSUSHIMA] 1♂7♀, same locality as holotype, 15. x. 1979 (I. KANAZAWA); 1♂1♀, same locality and date (K. YASUDA); 6♂13♀, same data as holotype; 3♂5♀, Mt. Taterayama, Izuhara-machi, 16. x. 1983 (I. KANAZAWA).

Remarks: *S. robusta* is easily distinguished from other Japanese species by its larger size and the ash grey forewings. It most closely resembles *S. notomochla* in size and the male genitalia, but the head is white, not whitish ochreous, and the thorax is white to whitish ochreous, not blackish fulvous. The strongly sclerotized male genitalia are characterized by the rounded uncus and the short saccular processes, and the female genitalia by the slender 8th sternum not divided bilaterally. At present this species is known to be distributed only in Tsushima Is.

Stenolechia squamifera sp. nov.

(Figs. 1E, 9, 10A–D)

Head whitish ochreous, speckled with fuscous, as most of dorsal scales marked with a brown subapical band. Antenna about 4/5 as long as forewing; scape with an obscure fuscous band near apex; in male flagellum thick, densely and entirely bearing short fine erect sensory hairs. Labial palpus whitish ochreous in ground colour.

Thorax whitish ochreous and scattered with fuscous scales, mesoscutum with a pair of small fuscous spots on anterior portion and a larger fuscous posterior suffusion extending to mesoscutellum; tegula whitish ochreous. Abdomen grey above with whitish ochreous scales apically, below almost white. Legs whitish ochreous.

Forewing 3.5–4.2 mm in length, whitish ochreous, speckled with fuscous, and having the following dark fuscous markings; 3 large blackish spots on costa, each near base, at 1/3 and 3/5; 2 large blackish spots, each beneath base of fold and above distal end of fold; 2 small blackish spots on fold, each at 1/3 and 2/3, 3 small blackish spots on discal area, each at 1/4, 1/2 and 4/5; 4 obscure fulvous spots in basal 2/3 on discal

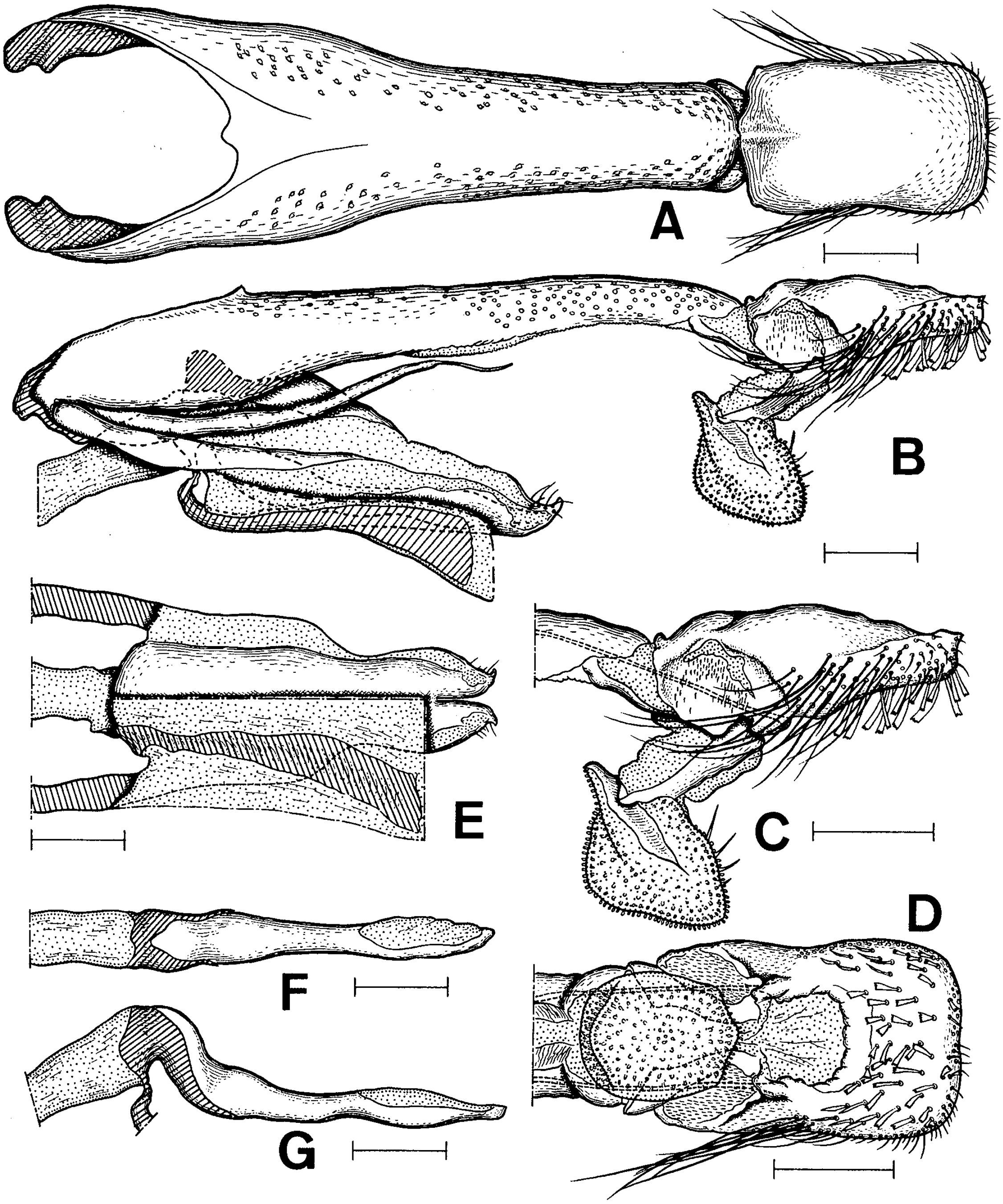

Fig. 9. Male genitalia of *S. squamifera* sp. nov. A: Dorsum in dorsal view. B: Genitalia in lateral view. C: Uncus and gnathos in lateral view. D: Ditto in ventral view. E: Saccus and sacculus in ventral view. F: Phallus in dorsal view. G: Ditto in lateral view. (Scale: 0.1 mm)

area; cilia white with a row of dark fuscous speckles at the middle and two rows of fuscous speckles apically. Hindwing not trapezoidal, abruptly tapering in distal 1/3.

Male genitalia: Eighth sternum about 10 times as long as 8th tergum, but not covering uncus in normal situation. Sclerotized extension from posteroventral portion of saccus slender, with ventromedian membranous area.

Tegumen slender, 4 times as long as uncus, tapered posteriorly in basal 1/2, then keeping almost the same width in distal 1/2, and ending in rounded posterior margin, without tufts of scales and membranous spots; pedunculus moderately long and rather thick, with small lapel on anterior margin. Region of fenestrula almost square in dorsal view, bearing longitudinally narrow anterolateral sclerites. Uncus flattened, slightly dilated towards flat truncate posterior margin which bears several clear transverse wrinkles submarginally, clothed with conspicuously long hairs on anterolateral surfaces and scale-like setae on posterovental surface. Gnathos almost as long as uncus; lateral sclerite relatively slender and almost straight in lateral view; ventral sclerite slender, bearing a membranous lobe, but median projection indistinct. Sclerotized spinules well developed into stalked papillae but restricted only on distal membranous lobe of gnathos. Vinculum absent or indistinct. Saccus conspicuously small and curved dorsally towards tip, fused with base of sacculus; its connection with phallus weak. Costa rather short and much slender, reaching to 1/2 of tegumen, articulated with valva at an anterior and an anteroventral points, slightly dorsally, tapering apically into a slender thread-like process. Sacculi represented by a pair of short processes which are situated at apical portion of an elongate ventromedian sclerite continuous to saccus; process of each sacculus short, tapering to acute, laterally directed point, bearing several hairs on dorsal surface near apex. Aedeagus considerably short and moderately thick, about 0.4 times as long as tegumen, slightly depressed in basal 1/2; subzonal sheath short, strongly curved ventrally; suprazonal sheath slightly curved dorsally and tapering beyond the middle, with dorsal membranous area on distal 1/3.

Female genitalia: Seventh abdominal sternum having almost straight posterior margin and concealing ostium bursae. Eighth abdominal segment moderately long and stout; 8th tergite completely united with 8th sternum, border between them represented by a shallow groove which is more or less keeled along ventral margin, each of divided tergites rather slender, bearing 3–5 short setae posteriorly, with its entire anterior margin invaginated into apophysis anterioris; 8th sternum broad, weakly arched posteriorly, forming a pair of moderately long, slender, subventral apodemal processes from anterior margin, emarginate anteromedially by membranous area which includes ostium bursae; ostium bursae small, surrounded by a pair of weakly sclerotized small lobes; ductus bursae short, about 0.2 times as long as apophysis posterioris, almost straight, evenly dilated towards corpus bursae, so that border between them not clearly defined; corpus bursae fusiform, about 2.2 times as long as ductus bursae and bearing a pair of signa; each signum being an extremely long, narrow sclerite, rather sparsely spinulate on entire surface, more or less pointed at posterior extremity, and on its anterior 1/2 strongly raised to be a large keel which is 1/3 as high as length of signum and roundly protrudes anteriorly. Apophysis posterioris 3.8 times as long as apophysis anterioris.

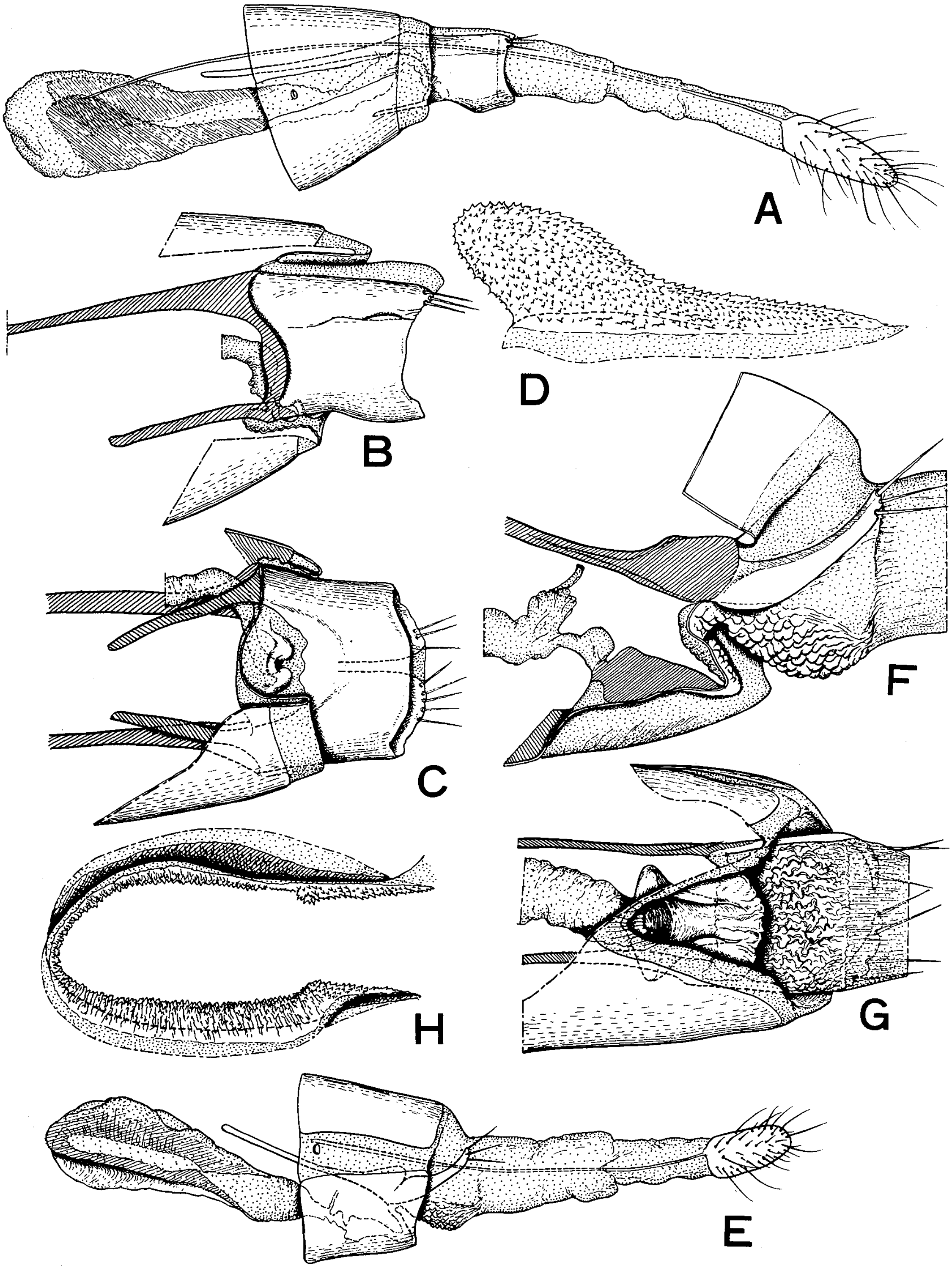

Fig. 10. Female genitalia of *Stenolechia* species. A: *S. squamifera* sp. nov., in lateral view. B: Ditto, ostium in lateral view. C: Ditto in ventral view. D: Ditto, signum. E: *S. rectivalva* sp. nov., in lateral view. F: Ditto, ostium in lateral view. G: Ditto in ventral view. H: Ditto, signum.

Distribution: Kyushu, Tsushima Is.

Holotype ♂ (Type No. 2471, Kyushu Univ.), Kamisaka-kôen, Izuhara-machi, Tsushima Is., 28–29. viii. 1979 (I. KANAZAWA).

Paratypes: [KYUSHU] 6♀, Mt. Hikosan, Fukuoka Pref., 22. vi. 1979 (I. KANAZAWA). [TSUSHIMA] 1♀, Sumo, Mitsushima-cho, 29. vi. 1979 (I. KANAZAWA); 1♂1♀, same locality and collector as holotype, 28. vi. 1979; 3♂1♀, same data as holotype.

Remarks: *S. squamifera* is unique in having the lanceolate hindwings, which separate it from all other species except the next new species, *rectivalva*. The male genitalia of this species are characterized by the scale-like setae on the ventrodistal portion of uncus, which is clothed with fine setae or spinules in all other species, and by the almost membranized vinculum which is found only in *rectivalva*. A pair of slender apodemal processes of the 8th sternum and the greatly enlarged signa of the female genitalia also separate this species from known members of the genus. This new species is most closely related to the next new species, and their differences will be given in remarks of the latter species.

Stenolechia rectivalva sp. nov.

(Figs. 1F, 10E–H, 11)

Head pure white, without dark speckles. Antenna about 4/5 length of forewing, slightly serrate in distal 1/2; scape with a fuscous band near apex; in male flagellum rather slender, without erect sensory hairs. Labial palpus white in ground colour.

Thorax white with a large central fuscous suffusion on mesoscutum; tegula white. Abdomen white with whitish grey scales in anterodorsal portion. Legs white.

Forewing 3.5–4.2 mm in length, white and scattered with fuscous scales, also with yellowish scales on discal area, and with the following dark fuscous markings; 3 large blakish spots on costa, each near base, at 1/3 and 2/3; 2 medium-sized blackish spots, each beneath base of fold and above distal end of fold; 2 small blackish spots on fold, each at 1/3 and 2/3, the latter ocassionally absent; a blackish spot at 1/2 on discal area; some yellowish spots on discal area; cilia white with a row of dark fuscous speckles at the middle and two rows of obscure fuscous speckles apically. Hindwing not trapezoidal, abruptly tapering in distal 1/3.

Male genitalia: Eighth sternum about 6 times as long as 8th tergum, but not reaching to gnathos in normal situation. Sclerotized extension from posteroventral portion of saccus trapezoidal and recurved ventrally.

Tegumen slender, evenly tapered posteriorly, and ending in rounded posterior margin, without tufts and membranous spots; pedunculus moderate in size, without distinct lapel. Region of fenestrula square in dorsal view, bearing rather broad anterolateral sclerites. Uncus widest at the middle, gently narrowing to rounded posterior margin, bearing dense long hairs laterally, short hairs posteriorly, and several short spinules on ventrolateral surface. Gnathos slightly longer than uncus; lateral sclerite thick and straight in lateral view, with a keel along outer margin; ventral sclerite with a small median projection; sclerotized spinules comparatively developed

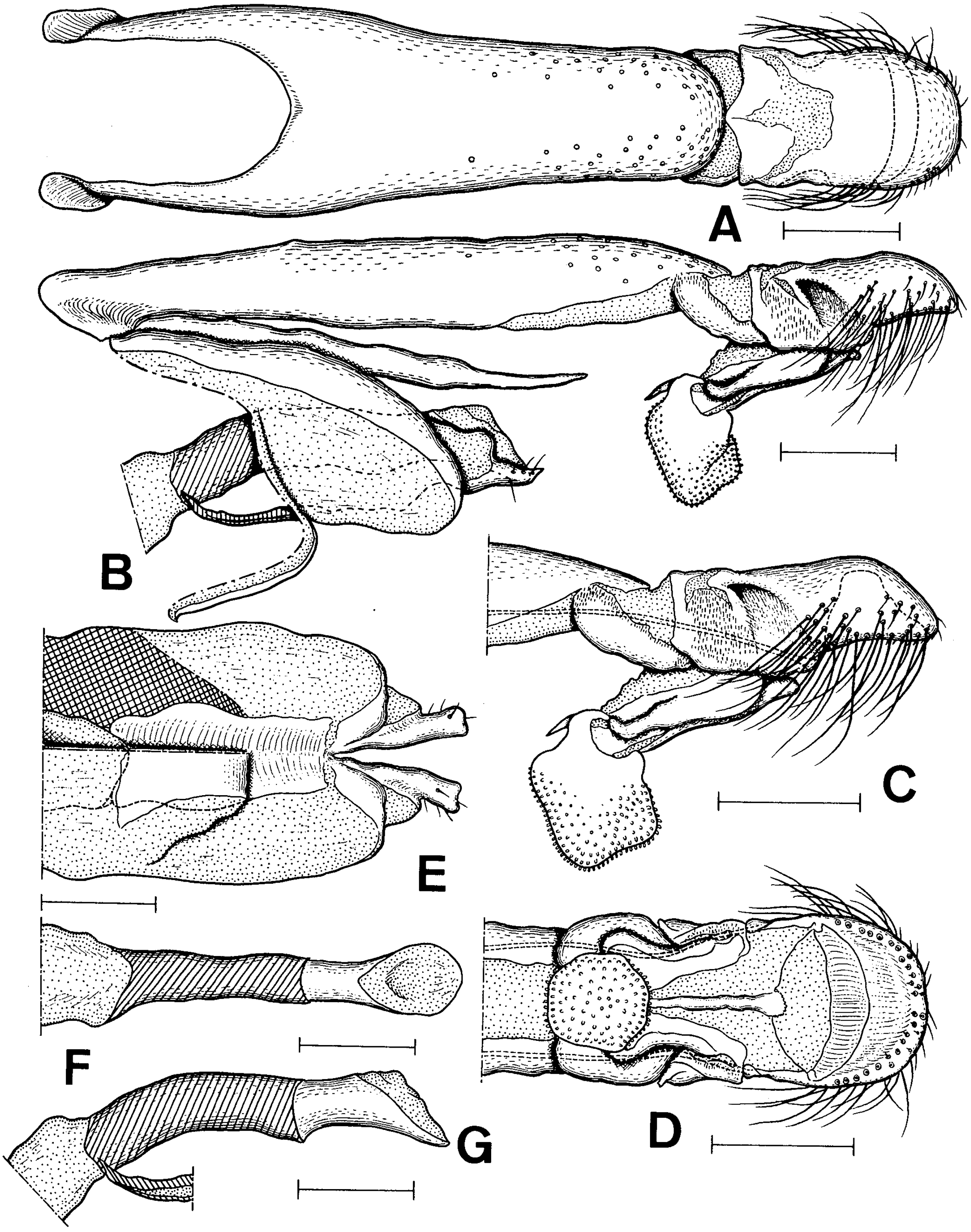

Fig. 11. Male genitalia of *S. rectivalva* sp. nov. A: Dorsum in dorsal view. B: Genitalia in lateral view. C: Uncus and gnathos in lateral view. D: Ditto in ventral view. E: Saccus and sacculus in ventral view. F: Phallus in dorsal view. G: Ditto in lateral view. (Scale: 0.1 mm)

into stalked papillae, but restricted only on distal, weakly sclerotized lobe of gnathos. Vinculum absent or indistinct. Saccus relatively long, gradually tapering anteriorly in lateral view; its connection with phallus not strong. Costa moderately elongate, almost straight in lateral view, reaching to about 4/5 of tegumen, ventrally fused with valva, constricted at distal 1/3, then tapering to a sharply pointed tip. Sacculus short, about 0.27 times as long as costa; its process short, thin and slightly flattened, bearing some hairs near a truncate apex. Aedeagus rather short and relatively thick, about 1/2 as long as tegumen, almost cylindrical; subzonal sheath longer than suprazonal sheath, slightly curved ventrally; suprazonal sheath rather tapering in basal 1/2, then dilated subapically and ending in an obtuse tip in dorsal view, with dorsal membranous area on distal 1/2; cornutus indistinct.

Female genitalia: Seventh abdominal sternum with posterior margin deeply incised in V-shape, not covering ostium bursae. Eighth abdominal segment very short; each of divided 8th tergites extremely slender, obliquely transverse, more or less dilated towards anterolateral corner, bearing 3–4 setae on posterosubdorsal margin, and forming a rather short apophysis anterioris, which is broad basally, nearly 2 times as long as tergite; 8th sternum weakly sclerotized, reticulately wrinkled and minutely tuberculate, this area weakly telescoped anteriorly as intersegmental area. Ostium bursae situated on weakly sclerotized anterior portion of intersegmental area, exposed posterior to incised part of 7th abdominal sternum; this sclerotized area more or less rounded on posterior margin, having a median furrow which is expanded anteriorly, there ductus bursae opens; ductus bursae conspicuously short, about 0.12 times as long as apophysis posterioris, almost straight, gradually and evenly widening to corpus bursae, without sclerotized thickening; corpus bursae fusiform, nearly 4.5 times as long as ductus bursae, and with a single signum; signum being a large, slender, U-shaped sclerite more or less raised along longitudinal median line, having arms directing posteriorly and pointing apically, the signum weakly tuberculate at posterior 1/3 of each arm, entirely and evenly spinulose, the spinules on anterior 2/3 usually transversely arranged in irregular rows. Apophysis posterioris 2.5 times as long as apophysis anterioris.

Distribution: Honshu.

Holotype ♂ (Type No. 2472, Kyushu Univ.), Shinhodaka-onsen, Kamitakara-mura, Gifu Pref., Honshu, 11. vi. 1980 (I. KANAZAWA).

Paratypes: [HONSHU] 4♂ 18♀, same locality and collector as holotype, 12. vi. 1980.

Remarks: *S. rectivalva* is externally similar to *squamifera* and shares with it the lanceolate hindwing. But this new species is distinguished from *S. squamifera* by the white-scaled head without speckles, by the straight costa, thick aedeagus with long subzonal sheath and simple spinules on posteroventral surface of uncus in the male genitalia, and by the transversely slender 8th tergite and the single signum of the U-shaped slender scobinate band in the female genitalia.

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摘要

日本産 *Stenolechia* 属キバガの再検討（金沢　至）

Stenolechia 属は，旧北区および東洋区から14種知られ，前翅の脈 R_4, R_5, M_1 の共通柄の存在と M_3 と Culb の消失で特徴づけられる．我国から4種が記載されているが，いずれも白っぽい地色の前翅に数個の黒点を持つ小型のキバガで，これら日本産全種に共通する雄交尾器の saccus と aedeagus の融合は，他の鱗翅類にみられないまれな共有新形質である．ところが，この中で *S. issikiella* は，他の3種とは翅脈相と雄交尾器において大きく異なるので，この研究の対象から除外した．また，既知種 *S. notomochla* の雌交尾器を初めて記載し，以下の3新種を記載した．

Stenolechia robusta Kanazawa　ツシマチビキバガ

日本産 *Stenolechia* 属の中では前翅が最も灰色がかった種で，大きさと雄交尾器形態は *S. notomochla* に似る．*notomochla* とは，頭胸部の地色が白色で雄交尾器の anellus に突起を持たないことで区別される．雄交尾器では，強い骨化，腹方に腕曲した長い aedeagus, そして中央が強くくびれた tegumen により，雌交尾器では，細長くへら状の第8腹節腹板の存在により同定できる．

対馬で10月に採集されている．

Stenolechia squamifera Kanazawa　ウロコホソハネキバガ

外観は *S. rectivalva* に似ており，後翅が台形でなく徐々に細くなること，雄交尾器の vinculum の消失と短い aedeagus という点において共通しているが，雄の触角に密な微感覚毛を持つことで区別される．雄交尾器では，uncus 腹面の変形した鱗粉と強く腹方に腕曲した aedeagus のsubzonal sheath により，雌交尾器では，2つの大きな板状の signa により同定できる．

九州と対馬に分布する．なお本文中には述べていないが，これらの産地のものとは雄交尾器に小さな違いが認められる個体が，本州と西表島で採集されている．

Stenolechia rectivalva Kanazawa　シロホソハネキバガ

雄交尾器では，ほぼまっすぐな costal arm と少し骨化した gnathal lobe により，雌交尾器では，帯状の signum により容易に同定できる．

岐阜県上宝村新穂高温泉で6月に採集されている．岡田 (1962) のコメツガチビキバガという不明種があるいはこの種かもしれない．

参考のために，以下に外部形態に基づく日本産 *Stenolechia* 属6種の検索表を示す．

1. 後翅は先端に向って徐々に細くなり，肛(臀)角が不明瞭である……………………………………2
— 後翅はキバガ科の種で通常見られるように台形に近く，肛角が明瞭である…………………………3
2. 頭部の地色は白色がかったオーカー色（黄土色）で，暗色の小斑点を散在し，背面の多くの鱗粉は茶色の横帯を先端近くに持つ；中胸背板は前方に一対の暗色小斑を，後方に1個の大斑を有する；雄触角の鞭節は太く，全体に密な微小で直立した感覚毛を具える …………*squamifera* Kanazawa
— 頭部は白色で暗色の小斑点を欠き，背面の鱗粉は純白である；中胸背板は背面中央に1個の暗色大斑を持つのみである；雄触角の鞭節は多少細く，前述のような直立した感覚毛を欠く………………………………………………………………………………………*rectivalva* Kanazawa
3. 小型の種で，前翅長は 2.9–3.7 mm; 雄触角の鞭節は太く，まばらな微小で直立した感覚毛を具える…………………………………………………………………………………………………4

— 大型の種で，前翅長は 4.2–5.9 mm; 雄触角の鞭節は細く，直立した感覚毛を欠く……………………5

4. 前翅は黄色鱗粉を散布する；頭部背面は白色がかったオーカー色で，明瞭な斑点を欠く……………………………………………………………………………………………*bathrodyas* MEYRICK

— 前翅は黄色鱗粉を欠く；頭部背面の地色は白色がかったオーカー色だが，明瞭な暗色小斑を持つ……………………………………………………………………………………………*kodamai* OKADA

5. 頭部は白色で，数個の明瞭な暗色小斑を持つ；前翅の地色は灰色で，長さは 4.5–5.9 mm ……………………………………………………………………………………………*robusta* KANAZAWA

— 頭部はオーカー色で，多くは不明瞭な枯葉色の小斑を持つ；前翅の地色は灰色がかったオーカー色で，長さは 4.2–5.0 mm……………………………………………………*notomochla* MEYRICK